## Substitute for Form 1449/PTO Complete if Known Application Number 10/572,524 INFORMATION DISCLOSURE September 11, 2007 Filing Date STATEMENT BY APPLICANT First Named Inventor: Xuejun Kang, et al. (use as many sheets as necessary) Art Unit 2822 **Examiner Name** Joy, Jeremy J. Sheet 1 of 5 7989P001 Attorney Docket Number **U.S. PATENT DOCUMENTS** Pages, Columns, Lines, Cite No. Publication Date Name of Patentee or Examiner Initials\* Document Number MM-DD-YYYY Applicant of Cited Document Where Relevant Passages or Relevant Number-Kind Code<sup>2</sup>(If known) Figures Appear US-4,107,720 8/15/1978 Pucel et al. US-5,192,987 3/9/1993 Khan et al. US-5,405,804 4/11/1995 Yabe US-6,091,085 7/18/2000 Lester US-6,169,297 01/02/2001 Jang et al. Steigerwald et al. US-6,307,218 10/23/2001 Kneissl, et al US 6,365,429 4/2/2002 US 6,420,242 7/16/2002 Cheung et al. US-6,420,732 7/16/2002 Kung et al. 6,492,661 US-12/10/2002 Chien et al. US-6,573,537 6/3/2003 Steigerwald et al. US-11/23/2004 6,821,804 Thibeault et al. US-2002/0022286 A1 2/21/2002 Nikolaev et al. US-2002/0034835 A1 3/21/2002 Chen et al. US-2002/0093023 A1 7/18/2002 Camras et al.

	FOREIGN PATENT DOCUMENTS									
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant	T <sup>6</sup>				
milaio		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	MM-DD-YYYY	Applicant of Oiled Document	Passages or Relevant Figures Appear					
		CN 1373522 A	10/9/2002	Quanxin Photoelectric Science		*				
		EP 1 061 590 A1	12/20/2000	Shin-Etsu Handotai Co., Ltd.						
		EP 1 139 409 A2	10/4/2001	Agere Systems Guardian Corporation						
		JP 2001-036129	2/9/2001	Dowa Mining Co.		*				
		JP 2001-168387	6/22/2001	Toyoda Gosei KK		*				
		JP 2001-237461	8/31/2001	Tokyo Shibaura Electric Co.		*				
		JP 2005-236048	9/2/2005	Shin-Etsu Handotai KK		*				
		JP 2006-253647	9/21/2006	Rohm Co. Ltd.		*				
		JP 10-117016	5/6/1998	Nichia Chem Ind. Ltd.		*				
		KR 10-2002-079659	10/19/2002	Epivalley Co. Ltd.	* 1 11 1	*				

\* only Abstract in English

Examiner	the second field	Date Considered	03/26/2010
Signature	/Jeremy Joy/		00/20/2010

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria Virginia 22313-1450.

## Substitute for Form 1449/PTO Complete if Known Application Number 10/572,524 INFORMATION DISCLOSURE September 11, 2007 Filing Date STATEMENT BY APPLICANT First Named Inventor: Xuejun Kang, et al. (use as many sheets as necessary) Art Unit 2822 **Examiner Name** Joy, Jeremy J. Sheet 2 5 7989P001 of Attorney Docket Number **U.S. PATENT DOCUMENTS** Pages, Columns, Lines, Cite No. Publication Date Name of Patentee or Examiner Initials\* Document Number MM-DD-YYYY Applicant of Cited Document Where Relevant Passages or Relevant Number-Kind Code<sup>2</sup>(If known) Figures Appear US-2002/0117681 A1 8/29/2002 Weeks et al. US-2002/0134985 A1 9/26/2002 Chen et al. US-2002/0179910 A1 12/5/2002 Slater Jr. US-2003/0038284 A1 2/27/2003 Kurahashi et al. US-2003/0111667 A1 6/19/2003 Schubert Uemura US-2003/0151357 A1 8/14/2003 US-2004/0026709 A1 2/12/2004 Bader et al. US-2004/0104395 A1 6/3/2004 Hagimoto et al. US-2004/0130037 A1 7/8/2004 Mishra et al. US-2005/0014303 A1 1/20/2005 Tsai et al. US-2005/0026399 A1 2/3/2005 Chien et al. US-2/17/2005 Lin et al. 2005/0035354 A1 US-2005/0082555 A1 4/21/2005 Chien et al. US-4/28/2005 Stokes et al. 2005/0087884 A1

	FOREIGN PATENT DOCUMENTS									
Examiner	Cite	Foreign Patent Document	Publication	Name of Patentee or	Pages, Columns,	T <sub>6</sub>				
Initials*	No. <sup>1</sup>	Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Date MM-DD-YYYY	Applicant of Cited Document	Lines, Where Relevant Passages or Relevant Figures Appear	,				
		SG 200506301-1	9/29/2005	Tinggi Technologies Private Limited						
		SG 200506897-8	10/19/2005	Tinggi Technologies Private Limited						
		SG 200606050-3	9/4/2006	Tinggi Technologies Private Limited						
		TW 475276 B	2/1/2002	Ind. Tech. Res. Inst.		*				
		WO 2001/047039 A1	6/28/2001	Lumileds Lighting, U.S., LLC						
		WO 2004/102686 A1	11/25/2004	Cree, Inc.						
		WO 2005/064666 A1	7/14/2005	Regents of the University of California						
		WO 2005/088743 A1	9/22/2005	Tinggi Technologies Private Limited						
		WO 2005/029573 A1	3/31/2005	Tinggi Technologies Private Limited						
		WO 2005/098974 A1	10/20/2005	Tinggi Technologies Private Limited						

5/5/2005

Tsai et al.

US-

2005/0093002 A1

\* only Abstract in English

Examiner	/Jeremy Joy/	Date Considered	02/26/2010
Signature			03/26/2010

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Substitute	for Form 144	9/PTO			Complete	if Known	
	INFOE	ΝΛΛ	TION DISCLOSUR	Application Number	10/572,524		
	IIVI OI	11717	TION DISCLOSUR	Filing Date	September 11, 2007		
	STAT	EME	ENT BY APPLICAN	First Named Inventor:	Xuejun Kang, et al.		
		(use as	s many sheets as necessary)		Art Unit	2822	
					Examiner Name Joy, Jeremy		
Sheet	3		of	5	Attorney Docket Number	7989P001	
			IIS PATEN	IT DOCUMENTS	3		
Examiner Initials*	Cite No.1	Num	Document Number ber-Kind Code <sup>2</sup> (lf known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
		US-	2005/0127397 A1	6/16/2005	Borges et al.		
		US-	2005/0164482 A1	7/28/2005	Saxlar		
		US-	2006/0124939 A1	6/15/2006	Lee et al.		
		US-	2006/0163586 A1	7/27/2006	Denbaars et al.		
		US-	2006/0186418 A1	8/24/2006	Edmond et al.		
		US-	2007/0029541 A1	2/8/2007	Xin et al.		
		US-					
		US-					
		US-					
		US-					
		US-					
		US-					
		US-					
		US-					
		US-					

	FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document  Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Te			
		WO 2007/037762 A1	5/4/2007	Tinggi Technologies Private Limited					
		WO 2007/046773 A1	4/26/2007	Tinggi Technologies Private Limited					
		WO 2007/073354 A1	6/28/2007	Tinggi Technologies Private Limited					
		WO 2008/020819 A1	2/21/2008	Tinggi Technologies Private Limited					
		WO 2008/030188 A1	3/15/2008	Tinggi Technologies Private Limited					

Examiner	/ loromy loy/	Date Considered	03/26/2010
Signature	/Jeremy Joy/		

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 'Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450**.

## Substitute for Form 1449/PTO Complete if Known Application Number 10/572,524 INFORMATION DISCLOSURE September 11, 2007 Filing Date STATEMENT BY APPLICANT First Named Inventor: Xuejun Kang, et al. (use as many sheets as necessary) Art Unit 2822 Examiner Name Joy, Jeremy J. Sheet 4 of 5 7989P001 Attorney Docket Number NON PATENT LITERATURE DOCUMENTS Examiner Cite Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the Initials\* No item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published ZHIFANG FAN, et al., "Very Low Resistance Multilayer Ohmic Contact to n-GaN," Applied Physics Letters, Volume 68, Issue 12, pgs. 1672-1674, (March 18, 1996). I. SCHNITZER, et al., "30% External Quantum Efficiency from Surface Textured, Thin-Film Light-Emitting Diodes," Applied Physics Letters, Volume 63, Issue 16, pgs. 2174-2176, (October 18, 1993). SHYI-MING PAN, et al., "Improvement of InGaN-GaN Light-Emitting Diodies with Surface-Textured Indium-Tin-Oxide Transparent Ohmic Contacts," IEEE Photonics Technology Letters, Volume 15, Issue 5, pgs. 649-651, (May 2003). CHUL HUH, et al., "Improved Light-Output and Electrical Performance of InGaN-Based Light-Emitting Diode by Microroughening of the p-GaN Surface," Journal of Applied Physics, Volume 93, Issue 11, pgs. 9383-9385, (June 1, 2003). F.A. KISH, et al., "Very High-Efficiency Semiconductor Wafer-Bonded Transparent-Substrate (AI<sub>x</sub>Ga<sub>1-x</sub>)<sub>0.5</sub>In<sub>0.5</sub>P/GaP Light-Emitting Diodes," Applied Physics Letters, Volume 64, Issue 21, pgs. 2839-2841, (May 23, 1994). R.H. HORNG, et al., "AlGalnP Light-Emitting Diodes with Mirror Substrates Fabricated by Wafer Bonding," Applied Physics Letters, Volume 75, Issue 20, pgs. 3054-3056, (November 15, 1999). H. SUGAWARA, et al., "Characteristics of a Distributed Bragg Reflector for the Visible-Light Spectral Region using InGaAIP and GaAs: Comparison of Transparent- and Loss- Type Structures," Journal of Applied Physics, Volume 74, Issue 5, pgs. 3189-3193, (September 1, 1993). PCT International Search Report for PCT Application No. PCT/SG2003/000223 containing Communication relating to the Results of the Partial International Search Report, 3 pgs., (December 9, 2003). PCT International Search Report for PCT Application No. PCT/SG2005/000061 containing Communication relating to the Results of the Partial International Search Report, 2 pgs., (May 12, 2005). PCT International Search Report for PCT Application No. PCT/SG2005/000062 containing Communication relating to the Results of the Partial International Search Report, 2 pgs., (May 12, 2005). PCT International Search Report for PCT Application No. PCT/SG2006/000254 containing Communication relating

Examiner		Date	02/26/2010
Signature	/Jeremy Joy/	Considered	03/20/2010

to the Results of the Partial International Search Report, 4 pgs., (November 16, 2006).

<sup>\*</sup>Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Substitute fo	r Form 1/	1/10/DTO					Comple	te if Known	
			DICC		LIDE	Application Number		10/572,524	
INFO	RIVIAI	ION	DISC	LUS	UKE	Filing Date		September 11, 2007	
STAT	EME	NT B	Y APF	PLIC.	ANT	First Named Inventor:		Xuejun Kang, et al.	
			ts as neces			Art Unit		2822	
						Examiner Name		Joy, Jeremy J.	
Sheet	5		of		5	Attorney Docket Number	r	7989P001	
				NON P	ATENT LIT	ERATURE DOCUMEN	ITS		
Examiner Initials*	Cite No <sup>1</sup>	Includ ite	e name of m (book, r	magazine	e, journal, se	AL LETTERS), title of the rial, symposium, catalog, eisher, city and/or country v	etc.), date		T <sup>2</sup>
						pplication No. PCT/SG2006/0earch Report, 3 pgs., (Novemb		ntaining Communication relating 6).	
						pplication No. PCT/SG2006/0 parch Report, 3 pgs., (Februar		ntaining Communication relating 7).	
		PCT International Search Report for PCT Application No. PCT/SG2007/000261 containing Communication relating to the Results of the Partial International Search Report, 3 pgs., (October 12, 2007).							
		PCT International Search Report for PCT Application No. PCT/SG2007/000288 containing Communication relating to the Results of the Partial International Search Report, 3 pgs., (November 9, 2007).							
	1								

Examiner	/Jeremy Joy/	Date	03/26/2010
Signature	/Jeremy Joy/	Considered	03/20/2010

<sup>\*</sup>Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.